

Quality of Life Indicators in Relation to Income and Physical Activity for Rhode Island Adults, 2002

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Increasing the quality of life and years of healthy life by the year 2010 is an over-arching public health goal for Rhode Island, as it is for the nation.¹ The concept of health-related quality of life (HRQOL) refers to a person's "perceived physical and mental health."² It is estimated that 41 million American adults ages 18 years and older experience physical or mental impairment that affects their quality of life.³

This report examines ten indicators for HRQOL for Rhode Island adults in 2002, in relation to income level and physical activity. Data are from the 2002 Rhode Island Behavioral Risk Factor Surveillance System (BRFSS).

Methods. The BRFSS is a national telephone survey of randomly selected non-institutionalized adults (ages 18 and older). The BRFSS monitors the prevalence of behavioral risks that contribute to the leading causes of disease and death among adults in the United States. It is administered in all 50 states and four U.S. territories with funding and methodological specifications provided by the Centers for Disease Control and Prevention (CDC).⁴

In 2002 the Rhode Island BRFSS conducted 3,843 random-digit dialed interviews throughout the calendar year. "Error" bars on the charts represent the 95% confidence limits around the values calculated from the sample data. Chi-square tests of differences were tested at the $p < 0.01$ level for statistical significance.

The BRFSS HRQOL questions include: self-rated general health status, self-reported number of healthy/unhealthy days in the past 30 days for physical health, mental health, physical or mental health related activity limitations, pain related activity limitations, depression, anxiety, lack of sleep, and lack of energy.⁵ A derived variable was "major depressive episode (MDE) in the past year."

Response categories for the HRQOL items were dichotomized as follow: General overall health status was dichotomized into poor/fair vs. good/very good/excellent health. The number of unhealthy days or activity limitation days was dichotomized as 14 or more days of

poor health in the past month vs. less than 14 days. The MDE variable was dichotomized as occurred/did not occur in the past 12 months.

We obtained overall prevalence estimates for each of the 10 HRQOL indicators and examined the relationship between HRQOL variables and each of 12 independent variables. Here we present results for household income and participation in leisure time physical activity. These were two of the independent variables having the strongest correlation with multiple indicators of poor HRQOL.

Results. Overall, 14% of Rhode Island adults reported fair or poor general health. Using the criterion of 14 or more days of poor health in the past month (referred to hereafter as "recent frequent" (RF) poor health), the two highest prevalence HRQOL measures were for RF lack of energy (28%) and RF inadequate sleep or rest (24%). Also, 10% had RF poor physical health, 5% had RF activity limitations due to a physical or mental health problem, and 7% had RF pain-related activity limitations. Ten percent reported RF poor mental health (stress, depression, and problems with emotions), 8% had RF days when they felt sad, blue or depressed, and 13% had RF days when they felt worried, tense or anxious. Eight

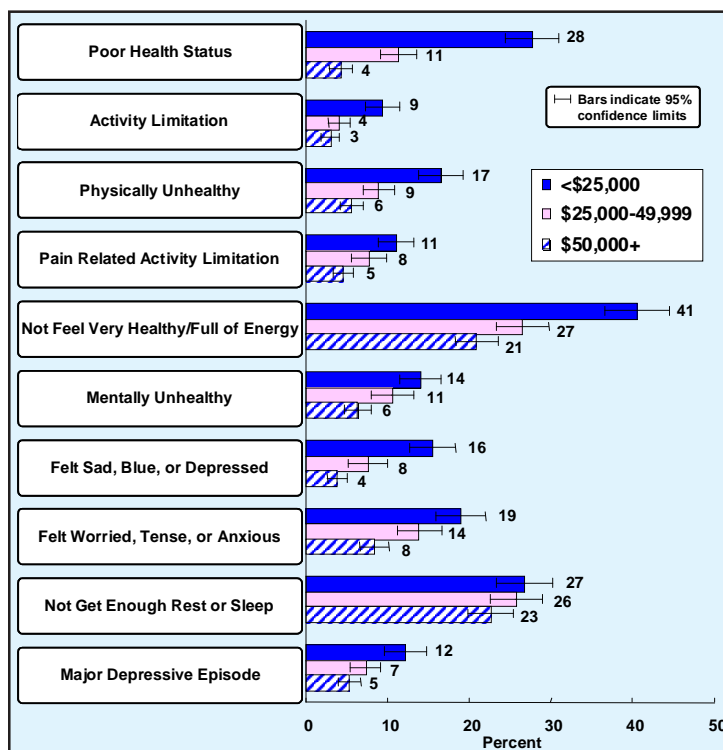


Figure 1. Health risks among Rhode Island adults (ages 18 and older) by income level, 2002.

— Health by Numbers —

percent of respondents had experienced a major depressive episode in the past 12 months.

By income, the prevalence of all poor HRQOL indicators was greatest for persons with household incomes less than \$25,000 and lowest for persons with household incomes of \$50,000 or more. (Figure 1) In all instances but one (“not get enough rest or sleep”), the rates for the lowest income group were twice, or more than twice, as great as the rates for the highest income group. These differences were all statistically significant. The most extreme difference occurred for general health status, where 28% of the lowest income group reported poor/fair general health, a rate 7 times greater than for the highest income group. RF feelings of being sad, blue or depressed was the next largest difference. The rate for the lowest income group (16%) was 4 times that of the highest income group.

Adults who reported engaging in no leisure time physical activity had higher rates for all poor HRQOL indicators than adults who reported being physically active. (Figure 2) In comparison to physically active adults, rates for inactive adults ranged from being 1.27 times as high (“lack of rest/sleep”) to more than 3 times as high (“activity limitation”).

Discussion. The large number of Rhode Island adults whose quality of life is impaired in some way, as reflected by these HRQOL measures, is sobering. About one fourth of RI adults, approximately 200,000 people, do not get enough rest or sleep; about the same number do not feel very healthy and full of energy. About 1 in 10 adults, or 80,000 people, report an indicator for some kind of RF poor mental health or for RF poor physical health, and about 1 in 10 (approximately 80,000 people) report activity limitations due to a physical or mental problem or pain. Because these HRQOL indicators do overlap

one another to some extent, in future analyses we will examine interactions among them.

A relationship between poor health outcomes (e.g. mortality, disease incidence, and disability) and low income in the United States has been observed in many studies. Our results show that the relationship between poor health and low income extends into subjectively felt measures of HRQOL. The poor are not only sicker, but also experience poorer quality of life, reinforcing the need to target public interventions towards them.

The strength and pervasiveness of the correlation between lack of physical activity and poor HRQOL supports the findings of others,⁶ as well as work which has identified a predictive relationship between perceived health and physical activity behavior.⁷ There has been little improvement over the past 15 years in levels of physical activity in RI as measured by the BRFSS.⁸ Increasing levels of physical activity may require efforts to improve aspects of quality of life, as well as to encourage people to exercise more.

Much of the investment in health over the past 100 years has gone towards saving and prolonging life. With these efforts, more Americans today live longer, but many live with chronic conditions and in circumstances that adversely affect their ability to lead high quality lives. Since enhancing quality of life has become an overarching goal for public health, we must continue and improve our ability to monitor health related quality of life.

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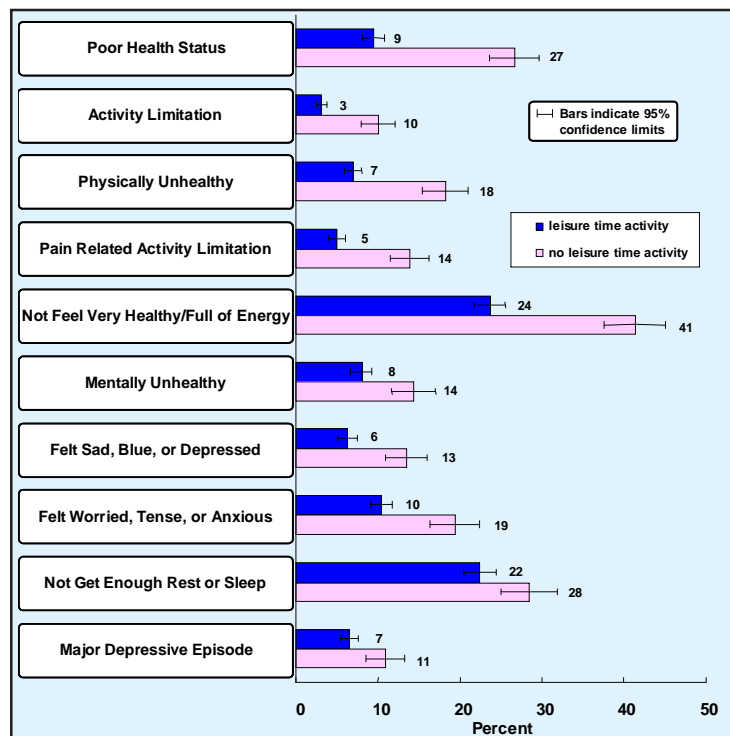


Figure 2. Health risks among Rhode Island adults (ages 18 and older) by leisure time activity, 2002.

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